CHUCK REMOVAL

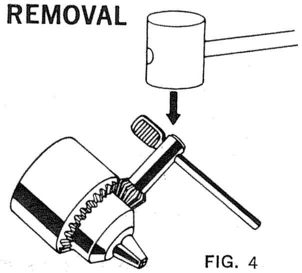


FIG. 4

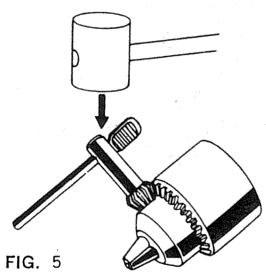


FIG. 5

For Reversing Drills, start with step 1.

For Non-Reversing Drills, skip steps 1 & 2 and start with step 3.

1. Place chuck key in chuck as shown in Figure 4. Using a wooden mallet or similar object, strike key sharply in a CLOCKWISE direction. This will loosen screw inside chuck (Figure 4).
2. Open chuck jaws fully. Insert screwdriver into front of chuck between jaws to engage screw head. Remove screw by turning clockwise (left-hand thread).
3. Place key in chuck as shown in Figure 5. Using a wooden mallet or similar object, strike key sharply in a COUNTER-CLOCKWISE direction (Figure 5). This will loosen chuck so that it can be unscrewed by hand.

LUBRICATION

All ball bearings used are factory lubricated to last the life of the bearings. All oil impregnated bearings used receive their lubrication from the grease in the gear case. Clean and re-lubricate gear case yearly or whenever servicing requires the gear case to be removed. Use type and quantity of grease show on Parts Bulletin packed with your tool.

Gear case is removed by removing the three screws from the front of the tool. If the chuck is too large to permit removal of the two top screws, see instructions for chuck removal.

IMPORTANT

To assure product SAFETY and RELIABILITY, repairs, maintenance and adjustment, (including brush inspection and replacement) should be performed by Black & Decker Service Centers or other qualified service organizations, always using Black & Decker replacement parts.

COMMERCIAL/INDUSTRIAL USE WARRANTY

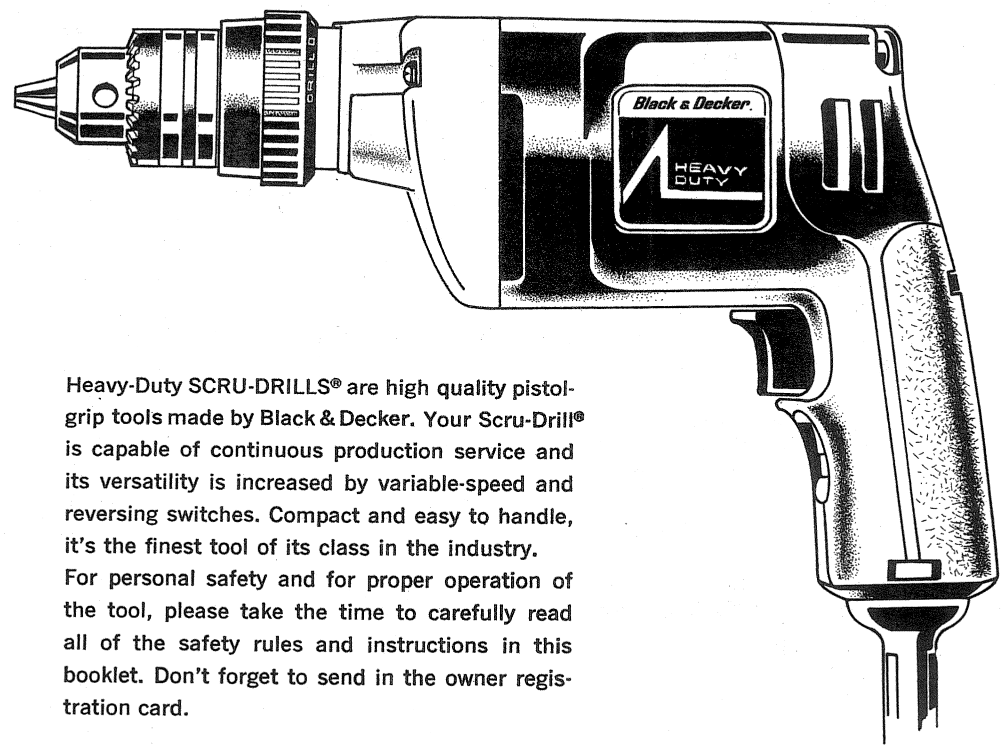
Black & Decker warrants this product for one year from date of purchase. We will repair without charge, any defects due to faulty material or workmanship. Please return the complete unit, transportation prepaid, to any Black & Decker Service Center or Authorized Service Station listed under "Tools Electric" in the yellow pages. This warranty does not apply to accessories or damage caused where repairs have been made or attempted by others.

BLACK & DECKER (U.S.) INC.
INDUSTRIAL/CONSTRUCTION DIVISION
626 HANOVER PIKE, HAMPSTEAD, MD. 21074, U.S.A.

Form No. 724401 (NOV81-CD) Printed in U.S.A.

Black & Decker®

OWNER'S MANUAL



Heavy-Duty SCRU-DRILLS® are high quality pistol-grip tools made by Black & Decker. Your Scru-Drill® is capable of continuous production service and its versatility is increased by variable-speed and reversing switches. Compact and easy to handle, it's the finest tool of its class in the industry.

For personal safety and for proper operation of the tool, please take the time to carefully read all of the safety rules and instructions in this booklet. Don't forget to send in the owner registration card.

THANK YOU for buying BLACK & DECKER!

• DOUBLE INSULATED •

HEAVY-DUTY SCRUDRILL®

Cat. Nos.
1575-10
6023-10

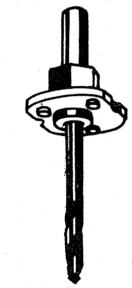
IMPORTANT SAFETY INSTRUCTIONS

WARNING: When using Electric Tools, basic safety precautions should always be followed to reduce risk of fire, electric shock, and personal injury, including the following:

READ ALL INSTRUCTIONS

1. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite injuries.
2. **CONSIDER WORK AREA ENVIRONMENT.** Don't expose power tools to rain. Don't use power tools in damp or wet locations. Keep work area well lit.
3. **GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces. For example: pipes, radiators, ranges, refrigerator enclosures.
4. **KEEP CHILDREN AWAY.** All visitors should be kept away from work area. Do not let visitors contact tool or extension cord.
5. **STORE IDLE TOOLS.** When not in use, tools should be stored in dry, and high or locked-up place—out of reach of children.
6. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was intended.
7. **USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy-duty tool. Don't use tool for purpose not intended, for example, don't use circular saw for cutting tree limbs or logs.
8. **DRESS PROPERLY.** Do not wear loose clothing or jewelry. They can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
9. **USE SAFETY GLASSES.** Also use face or dustmask if cutting operation is dusty.
10. **DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges.
11. **SECURE WORK.** Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.
12. **DON'T OVERREACH.** Keep proper footing and balance at all times.
13. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safe performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean, and free from oil and grease.
14. **DISCONNECT TOOLS.** When not in use, before servicing, and when changing accessories, such as blades, bits, cutters.
15. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
16. **AVOID UNINTENTIONAL STARTING.** Don't carry plugged-in tool with finger on switch. Be sure switch is off when plugging in.
17. **OUTDOOR USE EXTENSION CORDS.** When tool is used outdoors, use only extension cords intended for use outdoors and so marked.
18. **STAY ALERT.** Watch what you are doing. Use common sense. Do not operate tool when you are tired.
19. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this instruction manual. Have switches replaced by authorized service center. Do not use tool if switch does not turn it on and off.
20. **DO NOT OPERATE** portable electric tools near flammable liquids or in gaseous or explosive atmospheres. Motors in these tools normally spark, and the sparks might ignite fumes.

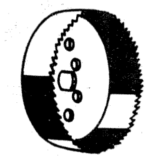
HOLE SAW MANDRELS



For 1/4″, and 3/8″ Drills

to fit 3/4″ to 1 3/16″ Hole Saws	No. 40093	Mandrel with Pilot Drill
to fit 1 1/4″ to 1 1/2″ Hole Saws	No. 40094	Mandrel with Pilot Drill
to fit above Mandrels	No. 22192	High Speed Steel Pilot Drill Only

HIGH-SPEED HOLE SAWS

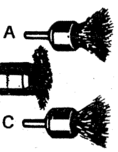


Use with Mandrels (Former Nos. in parentheses)

Saw Outside Diam.	Cat. No.	For 1/4″ or 3/8″ Drills	(Former No.)	For Conduit Sizes	For Pipe Tap Sizes
5/8″	36468	5/8″ Hole Saw has built-in Mandrel; no separate Mandrel supplied.			
3/4″	21747	40093	(22181)	3/8″	
7/8″	21748	40093	(22181)	1/2″	
1 5/16″	21749	40093	(22181)		3/4″
1″	21771	40093	(22181)		
1 1/16″	22809	40093	(22181)		
1 1/8″	21772	40093	(22181)	3/4″	
1 3/16″	21773	40093	(22181)		1″
1 1/4″	21781	40094	(22182)		
1 3/8″	21782	40094	(22182)	1″	
1 1/2″	21783	40094	(22182)		1 1/4″

Also available: No. 14935 Pilot drill; fits former Mandrels Nos. 14903, 14904 and and 18028. No. 22192 Pilot drill; fits former Mandrels Nos. 22181 and 22182.

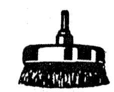
Carbon Removing Brushes



Made of tempered-steel wire; used with 1/4″ drills to remove rust and scale from metals. Leaves a burnished surface.

A. **No. 21416** Heavy-duty solid wire-filled brush.
B. **No. 21417** Side-flare brush for close corner work.
C. **No. 21419** Hollow-core, flare-bottom brush.
No. 21418 Small cleaning brush. (Not shown.)

3″ Wire Cup Brush



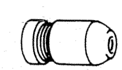
Use in cleaning and removing rust, scale, old paint.
No. 39014 (straight chuck shank). Max. safe RPM—5,000.

Heavy-Duty Tool Box



Cat. No. 50078
13″ x 8 1/2″ x 3/4″

Drill Stop



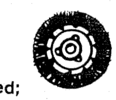
Capacity 1/4″ to 1/2″.
Governs drilling depth.
No. C 1578 Drill Stop.



Round-Shank Masonry Bits

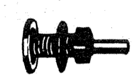
These bits are carbide-tipped for top performance and extra-long life in most masonry-drilling applications.

Wire Wheel Brushes



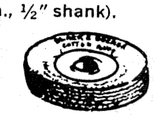
Use in cleaning and removing rust, scale, old paint.
No. 39008 4″ Fine Brush, crimped; Max. safe RPM—4,500
No. 39009 4″ Coarse Brush, crimped; Max. safe RPM—4,500

Wheel Arbors



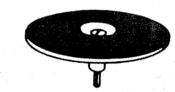
Fit 1/4″ to 1/2″ Drills. Carry grinding wheels, wire wheel brushes and buffing wheels.
No. 39026 1/4″ Arbor (1/2″ dia., 1/4″ shank).
No. 8449 1/2″ Arbor (1/2″ dia., 1/2″ shank).

Buffing Wheels



Use with 1/4″ to 1/2″ Drills and Wheel Arbors.
No. 39015 3″ x 3/8″ x 1/2″ Cotton Buff.

Rubber Backing Pad



Fit 1/4″ to 1/2″ Drills.
No. 66547 4 5/8″ Rubber Backing Pad with plain shank.

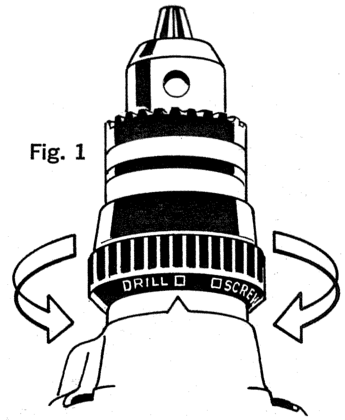
Cat. No.	Bit Diam. (in.)	Usable Drilling Depth (in.)	Shank Diam. (in.)
55702	3/16	1 1/2	3/16
55703	1/4	2	1/4
55704	5/16	2 1/4	1/4
55705	3/8	2 1/2	1/4
55706	1/2	2 1/2	1/4
56932	9/16	4 1/4	1/4

SCRUDRILL® OPERATION

DRILLING — Turn the knurled collar until the "square" next to the word "DRILL" is lined up opposite the indicator on the gear case (Fig. 1). This position is for normal drilling.

SCREWDRIVING — Turn the knurled collar until the "square" next to the word "SCREW" is lined up opposite the indicator on the gear case (Fig. 1). This position is for normal screwdriving or screw removal.

Fig. 1



DRIVING SCREWS

Available bits are Cat. No. 18593 Bit Assembly for No. 12 slotted head screws. Cat. No. 46098 Bit and Finder for No. 5 to No. 9 slotted head screws, Cat. No. 49278 Magnetic Drill-Screw Chuck for driving self-drilling, self-tapping screws with a 1/4" hex head and Cat. No. 63957 Magnetic Bit Tip Holder for holding bit tips with 1/4" hex shanks.

Adjust the collar to the screw driving position then insert the correct screw driving bit into chuck. Make sure that chuck jaw rests squarely on the "flats" of the bit — tighten chuck jaws securely using key in all 3 holes in the chuck. Turn on the unit and the chuck and bit will idle until the bit is engaged in the screw head and pressure is applied. The unit should be grasped firmly with both hands and a steady forward pressure applied — the screw will be driven down tight. At this point the clutch comes into operation and will ratchet or slip until the unit is removed from the screw. It is suggested that you pracice by driving a few screws into a scrap piece of material until you get the "feel" of this procedure. DO NOT RATCHET UNNECESSARILY.

DRILL ACCESSORIES

Recommended accessories for your Drill are shown in this manual and in Black & Decker Catalogs. (CAUTION: The use of any other accessory might be hazardous.) For safety in use, the following accessories should be used only in sizes up to the maximums shown in the table below.

MAXIMUM RECOMMENDED CAPACITIES

TOOL CAT. NOS. →	1575-10 6023-10
ACCESSORY R.P.M. →	0-1200
BITS, METAL DRILLING	3/8"
BITS, WOOD DRILLING	1 1/4"
BITS, MASONRY DRILLING	5/16"
HOLE SAWS	1 1/2"

The accessories listed in this manual are available at extra cost from your local dealer, Black & Decker Service Center, or by writing to: Customer Services, Black & Decker (U.S.) Inc., Towson, Maryland 21204

WIRE WHEEL BRUSHES
4" Diameter Maximum
WIRE CUP BRUSHES
3" Diameter Maximum
BUFFING WHEELS
3" Diameter Maximum
RUBBER BACKING PADS
4 5/8" Dia. Maximum

ACCESSORY MUST BE RATED FOR USE AT SPEED EQUAL TO OR HIGHER THAN NAMEPLATE R.P.M. OF TOOL WITH WHICH IT IS BEING USED.

DOUBLE INSULATION

Your Drill is DOUBLE-INSULATED to give you added safety. This means that it is constructed throughout with TWO separate "layers" of electrical insulation or one DOUBLE thickness of insulation between you and the tool's electrical system.

Tools built with this insulation system are not intended to be grounded. As a result, your Drill is equipped with a two-prong plug which permits you to use extension cords without concern for maintaining a ground connection.

NOTE: DOUBLE-INSULATION does not take the place of normal safety precautions when operating this tool. The insulation system is for added protection against injury resulting from a possible electrical insulation failure within the tool.

CAUTION: When servicing Double Insulated Tools. USE ONLY IDENTICAL REPLACEMENT PARTS. Repair or replace damaged cords.

SAVE THESE INSTRUCTIONS

EXTENSION CORDS

Double insulated tools have 2 wire cords, and can be used with 2 wire or 3 wire extension cords. Only round jacketed extension cords should be used, and we recommend that they be listed by Underwriters Laboratories (U.L.). If the extension will be used out side, the cord must be suitable for outdoor use. Any cord marked as outdoor can also be used for indoor work.

An extension cord must have adequate wire size (AWG or American Wire Gauge) for safety, and to prevent loss of power and overheating. The smaller the gauge number of the wire, the greater the capacity of the cable, that is 16 gauge has more capacity than 18 gauge. When using more than one extension to make up the total length, be sure each individual extension contains at least the minimum wire size.

To determine the minimum wire size required, refer to the chart below:

CHART FOR MINIMUM WIRE SIZE (AWG) OF EXTENSION CORDS

NAMEPLATE RATING - AMPS	TOTAL EXTENSION CORD LENGTH - FEET 25	50	75	100	125	150	175	200
0 - 10.0	18	18	16	16	14	14	12	12
10.1 - 13.0	16	16	14	14	14	12	12	12
13.1 - 15.0	14	14	12	12	12	12	12	—

Before using an extension cord, inspect it for loose or exposed wires, damaged insulation, and defective fittings. Make any needed repairs or replace the cord if necessary. Black & Decker has extension cords available that are U.L. listed for outdoor use.

MOTOR

Your Black & Decker tool is powered by a B & D-built motor. Be sure your power supply agrees with the nameplate marking.

Volts 50/60 Hz or "AC only" means your tool must be operated only with alternating current and **never** with direct current. Volts DC-60Hz or AC/DC means your tool may be operated with either alternating or direct current.

Voltage decrease of more than 10% will cause loss of power and overheating. All B&D tools are factory tested; if this tool does not operate, check the power supply.

All Reversing Tools have full power and perform as well in REVERSE as they do in FORWARD.

MOTOR BRUSHES

Your Drill uses the B & D "Checkpoint" brush system. The tool will stop when the brushes wear out (down to about $3/16$" long). This prevents damage to the motor.

SWITCHES

To start tool, depress trigger switch; to stop tool, release trigger. To lock trigger in "ON" position for continuous operation, depress trigger and push up locking button "A" Figure 1, then gently release trigger. To release locking mechanism, depress trigger fully, then release it. Before using the tool (each time) be sure that the lock button release mechanism is working freely.

Do not lock the switch "ON" when drilling by hand so that you can instantly release the trigger switch if the bit binds in the hole.

Be sure to release the switch locking button before disconnecting the plug from the power supply. Failure to do so will cause the tool to start immediately the next time it is plugged in. Damage or injury could result.

The Variable Speed Trigger Switch permits speed control — the farther the trigger is depressed, the higher the speed of the Drill. **NOTE:** Use lower speeds for starting holes without a center punch, drilling in metal or plastics, driving screws, drilling ceramics, or mixing paint. Higher speeds are better for drilling wood and composition boards, and for using abrasive and polishing accessories.

The Reversing Switch is used for removing screws at lower speeds. It is located on the back of the handle (Fig. 2). To reverse the motor, release the trigger FIRST and then push the reversing lever toward **"R"**. After any reversing operations, return switch to forward position by pushing it toward **"F"**.

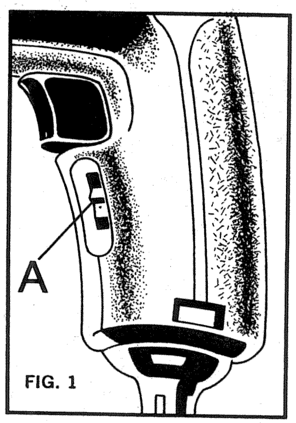


FIG. 1

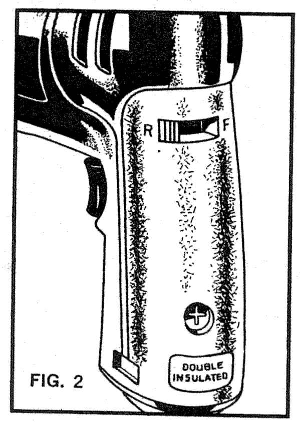


FIG. 2

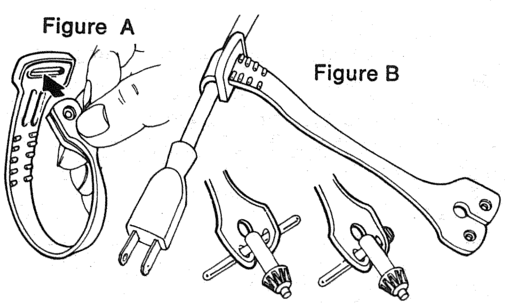


Figure A

Figure B

Figure C

CHUCK KEY HOLDER

1. Push double-hole end of Holder through slot in other end of Holder (Figure A).
2. Slip loop over electric plug and draw loop tight around cord (Figure B).
3. Push ends of Chuck Key Handle through two holes in end of Holder (Figure C).

CAUTION: When drilling into walls, floors or wherever "live" electrical wires may be encountered, DO NOT TOUCH THE CHUCK OR ANY FRONT METAL PARTS OF THE DRILL! Hold the Drill only by the plastic handle to prevent shock if you drill into a "live" wire.

OPERATION

DRILLING

1. Always unplug the tool when attaching or changing bits or accessories.
2. Open chuck jaws by turning collar with fingers and insert shank of bit about $3/4$" into chuck. Tighten chuck collar by hand. Place chuck key in each of the three holes, and tighten in clockwise direction. It's important to tighten chuck with all three holes. To release bit, turn chuck key counter clockwise in just one hole, then loosen chuck by hand.
3. Use sharp drill bits only. For WOOD, use twist drill bits, spade bits, power auger bits, or hole saws. For METAL, use high-speed steel twist drill bits or hole saws. For MASONRY, such as brick, cement, cinder block, etc., use carbide-tipped bits.
4. Be sure the material to be drilled is anchored or clamped **firmly.** If drilling thin material, use a wood "back-up" block to **prevent** damage to the material.
5. With Variable Speed Drills there is no need to center punch the point to be drilled. Use a slow speed to start the hole and accelerate by squeezing the trigger harder when the hole is deep enough to drill without the bit skipping out.
6. Always apply pressure in a straight line with the bit. Use enough pressure to keep drill biting, but do not push hard enough to stall the motor or deflect the bit.
7. Hold tool firmly to control the twisting action of the tool.
8. IF DRILL STALLS, it is usually because it is being overloaded or improperly used. RELEASE TRIGGER IMMEDIATELY, remove drill bit from work, and determine cause of stalling. DO NOT CLICK TRIGGER OFF AND ON IN AN ATTEMPT TO START A STALLED DRILL — THIS CAN DAMAGE THE DRILL.
9. To minimize stalling on breaking through the material, reduce pressure on drill and ease the bit through the last fractional part of the hole.
10. Keep the motor running when pulling the bit back out of a drilled hole. This will help prevent jamming.

DRILLING IN METAL

Use a cutting lubricant when drilling metals. The exceptions are cast iron and brass which should be drilled dry. The cutting lubricants that work best are sulphurized cutting oil or lard oil; bacon grease will also serve the purpose. Aluminum is best drilled with kerosene.

DRILLING IN WOOD

Holes in wood can be made with the same twist drills used for metal. These bits may overheat unless pulled out frequently to clear chips from the flutes. For larger holes, use Power Drill Wood Bits. Work that is apt to splinter should be backed up with a block of wood.